



Attorney's Docket No.: 09736-264001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Xiaobin Zhao  
Serial No. : 09/920,286  
Filed : August 2, 2001  
Title : PROCESS FOR THE PRODUCTION OF MULTIPLE CROSS-LINKED  
HYALURONIC ACID DERIVATIVES

Art Unit : 1623  
Examiner : Patrick T. Lewis

**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. § 1.132**

I, Xiaobin Zhao, hereby declare as follows:

1. I am a permanent resident of Great Britain and presently live at 49 Currievale Drive, Edinburgh EH14 5RN, United Kingdom.
2. I am employed at Mentor Biopolymers Limited, Research Avenue North, Heriot-watt Research Park, Edinburgh EH 14 4AP, United Kingdom.
3. I am the sole inventor listed on the above-referenced patent application.
4. I have reviewed the Tomihata *et al.* reference (*J. Biomed. Mater. Res.* 1997, 37:243-251) cited by the Examiner in the Office Action mailed August 10, 2004.
5. I believe that, contrary to the teachings of the Tomihata *et al.* reference, reacting hyaluronic acid with carbodiimide will result in an acylurea bond, not an ester bond. My belief is supported by subsequent work as evidenced by U.S. Patent No. 6,096,727, filed on February

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL**

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

December 10, 2004  
Date of Deposit  
Signature *B. Taylor*  
Brenda L. Taylor  
Typed or Printed Name of Person Signing Certificate

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24, 1998 and PCT publication no. WO 00/54762, published September 21, 2000. This work demonstrates that that cross-linking HA with carbodiimide results in stable acylurea bonds. For example, the PCT publication discloses that reaction of HA with carbodiimide results in an O-acylisourea derivative that, in the absence of a nucleophile, undergoes an intramolecular rearrangement to the N-acylurea derivative.

6. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 10 Dec 2004

  
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Xiaobin Zhao